37. (New)   A method as claimed in claim 11, wherein:

said plurality includes at least three of the orthogonal codes.--

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REMARKS

Entry of the above amendments, and early and favorable consideration on the merits are respectfully requested. Upon entry of this Preliminary Amendment, claims 8-11 and 22-37 will be pending.

Applicants note that in an Office Action issued in the parent application, claims 8-11 were rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 5,754,599 to Ling et al. Furthermore, claims 9, 10, 13 and 14 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. Of all the claims of the parent application, only claims 8-11 remain pending.

Claims 9 and 10 are being amended as indicated above to obviate the § 112, second paragraph, rejection. Also, Applicants respectfully traverse the § 102(e) rejection for the reasons set forth below. Specifically, Applicants submit that the Ling et al. patent fails to teach or suggest a method which uses a set of *a plurality of* orthogonal codes to encode data, increase the terminal capacity of a CDMA communication system, increase the amount of data transmitted by a CDMA communication system or decrease the errors in a CDMA communication system in the manners as specifically recited in independent claims 8-11, respectively.

The details of the claims in relation to the Ling et al. patent will now be discussed.

Independent claim 8 recites a method for encoding data for transmission in a communication system. The method includes the steps of partitioning a set of orthogonal codes

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into a subset with a plurality members, partitioning a plurality of data bits into packets, and encoding the plurality of data bits by assigning each packet to a corresponding member of the subset. Independent claim 9 recites a method for increasing the terminal capacity of a CDMA communication system comprising the steps of providing a set of orthogonal codes, assigning a plurality of the orthogonal codes in the set to a transmission, and decreasing power associated with the transmission to increase the number of transmissions capable of utilizing the CDMA communication system at a given time.

Similarly, independent claim 10 recites a method for increasing the amount of data transmitted by a CDMA communication system, comprising the steps of providing the steps of providing a set of orthogonal codes and assigning a plurality of the orthogonal codes in the set to a transmission. The method further includes the step of increasing a data rate associated with the transmission to increase the amount of data transmitted by the CDMA communication system. Also, independent claim 11 recites a method for decreasing the errors in a CDMA communication system, comprising the steps of providing a set of orthogonal codes and assigning a plurality of the orthogonal codes in the set to a transmission. The method further includes the step of lengthening an error code associated with the transmission to decrease the number of errors in the CDMA communication system.

The Ling patent teaches a method and apparatus for coherent channel estimation in a communication system. The method and apparatus employ a channel estimator 200 for coherently receiving and decoding an orthogonally encoded digital data spread spectrum signal 134 that has been demodulated by a demodulator 136 and fast Hadamard transforms 142 and 144.

The Examiner contends that column 3, line 65 through column 4, line 42 of the Ling et al. patent teach the use of a set of three orthogonal codes as recited in each of original independent claims 8-11.[1] However, Applicants respectfully submit that this section of the Ling et al. patent teaches the manner in which an orthogonally encoded spread spectrum digital signal is received, demodulated and decoded by an encoding device shown in Fig. 1 of the Ling et al. patent, which the Ling et al. patent identifies as "prior art" to its disclosed method and apparatus. Although this passage teaches that each orthogonally demodulated digital signal 146 and 160 has an associated Walsh index symbol which identifies each particular orthogonal code from within a set of mutually orthogonal codes, nowhere does this passage teach or suggest the use of *a plurality* of the orthogonal codes in a set. Hence, nowhere does this or any other passage of the Ling et al. patent teach or suggest that a plurality orthogonal codes in an established set of orthogonal codes are assigned to each data packet to encode transmission data as recited in claim 8, are used to increase the terminal capacity of a CDMA communication system as recited in claim 9, are used to increase the amount of data transmitted by a CDMA communication system as recited in claim 10, or are used to decrease the errors in a CDMA communication system as recited in claim 11.

For all these reasons, Applicants submit that claims 8-11 is allowable over the Ling et al. patent. In addition, new dependent claims 22- are being added which recite further features of the claimed embodiments, such as the look-up table features, and base station transmission features, for providing the set of a plurality orthogonal codes as described on pages 12-13 of the specification. It is believed that nowhere does the Ling et al. patent teach or suggest these features.

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[1] Original claims 8-11 recited "at least three" orthogonal codes. However, these claims have been amended to recite "a plurality of" orthogonal codes to cover two or more codes. New claims 34-37 have been added to specifically recite "at least three" orthogonal codes.

Should the Examiner have any questions, it is requested that the Examiner contact the undersigned at the number indicated below prior to taking action on the application.

Respectfully Submitted,

[signature] 02-26-02

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Dated:_____, 2002

I hereby certify that this correspondence is being sent deposited with the United States Postal Service as first-class mail in an envelope addressed to the Assistant Commissioner for Patents, Washington, DC 20231 on February 26, 2002.

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Ginger Fogle
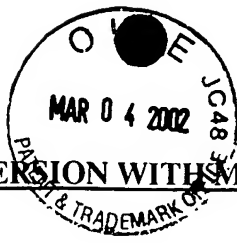
VERSION WITH MARKINGS TO SHOW CHANGES MADE

The following amendments were made to claims 8-11:

8. (Amended) A method for encoding data for transmission in a communication system comprising the steps of:

partitioning a set of orthogonal codes into a subset with a plurality of [at least three] members;

partitioning a plurality of data bits into packets; and,

encoding the plurality of data bits by assigning each packet to a corresponding member of the subset.

9. (Amended) A method for increasing [the] a terminal capacity of a CDMA communication system, comprising the steps of:

providing a set of orthogonal codes;

assigning [at least three] a plurality of the orthogonal codes in the set to a transmission; and,

decreasing power associated with the transmission thereby increasing [the] a number of transmissions capable of utilizing the CDMA communication system at a given time.

10. (Amended) A method for increasing [the] an amount of data transmitted by a CDMA communication system, comprising the steps of:

providing a set of orthogonal codes;

assigning [at least three] a plurality of the orthogonal codes in the set to a transmission; and

increasing a data rate associated with the transmission thereby increasing the amount of data

transmitted by the CDMA communication system.

11. (Amended) A method for decreasing the errors in a CDMA communication system,

comprising the steps of:

providing a set of orthogonal codes;

assigning [at least three] a plurality of the orthogonal codes in the set to a transmission; and,

lengthening an error code associated with the transmission thereby decreasing the number

of errors in the CDMA communication system.